# HERBACEOUS WIND BARRIERS

### PRACTICE INTRODUCTION

#### **USDA**, Natural Resources Conservation Service—Practice Code 603



## **HERBACEOUS WIND BARRIERS**

Herbaceous wind barriers are rows or narrow strips of upright, perennial vegetation established across the prevailing wind direction.

## PRACTICE INFORMATION

This practice is normally applied on cropland. The primary purpose is to reduce soil erosion generation from wind. The practice also protects growing crops from damage from wind-borne soil particles and may be used with other crop management practices to further reduce erosion, build soil quality, and improve yields. Herbaceous wind barriers also help in the management of snow distribution for plant available soil moisture and provide wildlife food and cover.

Installation of the practice requires that the vegetation be stiff and be resistant to lodging during inclement weather/seasons. The plant material must also have good leaf retention and not pose a competitive threat to adjacent crops.

Installation requires careful analysis of the predominant wind direction during the most susceptible time for wind erosion and crop damage. This will determine the alignment of the strips. As such, field shape, size, crop types, and machinery types and size are important considerations in planning

#### **COMMON ASSOCIATED PRACTICES**

Herbaceous Wind Barriers is commonly used in a Conservation Management System with the following practices:

- Conservation Cropping Sequence
- Cover Crop (340)
- Residue Management (any type)
- Upland Wildlife Habitat Management (645)

For further information, refer to the practice standard in the local Field Office Technical Guide and associated specifications and job sheets.

The following page identifies the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowner and are presumed to have been obtained. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

#### **Herbaceous Wind Barriers** 4/2007 Initial setting: Cropland impacted by wind erosion where increased plant **Herbaceous Wind Barriers** Start Note: Effects are qualified with a stress and mortality is a concern, (603)especially when affecting high value plus (+) or minus (-). These symbols indicate only an vegetable and specialty crops increase (+) or a decrease (-) in the effect upon the resource, not whether the effect is beneficial 1. Vigorous, upright vegetation D.6 (+) Fish or adverse. and associated root mass and wildlife cover D.5 (+) Cost for installation and D.4 (-) Land maintenance available for D.1 (+) Infiltration D.2 (+) Soil D.3 (-) Wind velocity crop production organic at soil surface matter I.15 (+) Food availability I.11 (-) Risk; I.16 (-) Habitat I.1 (-) Soil erosion I.5 (-) Plant I.10 (-) potential yields 1.14(+)fragmentation; (+) travel lanes Songbird damage from Chemical saltation drift nesting 1.17(+)Escape I.12 (+/-) routes 1.3 (-) I.6 (+) Snow Potential Pathogen trapping income transport I.18 (+) Predator I.13 (+/-) Net **LEGEND** pressure 1.2 (-) I. 7 (+) I.8 (-) Plant return Sediment Available soil heaving due deposition water for to freeze-Mitigating practice or plant growth thaw activity C.3 (+/-) Income and income stability Increase width of #. Created by practice (individuals and herbaceous wind I.4 (+) Quality of community) barrier receiving waters D. Direct effect and aquatic I.9 (+) Soil quality habitat I. Indirect effect C.4 (+) Quantity and quality of C.2 (+) Plant I.19 (+) Potential wildlife habitat; wildlife populations C. Cumulative effect productivity and and diversity vields C.1 (+) Fishable. cover swimmable waters; aquatic Pathway I.20 (+) Recreational populations I.21 (+) Biodiversity opportunities (+) increase; (-) decrease

The diagram above identifies the effects expected to occur when this practice is applied according to NRCS practice standards and specifications. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowner and are presumed to have been obtained. All income changes are partially dependent upon market fluctuations which are independent of the conservation practices. Users are cautioned that these effects are estimates that may or may not apply to a specific site.